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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MEDLEY, MARGARET B

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/779,588

Applicant(s)

LEVY, RICHARD

Examiner

Margaret B. Medley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 57-85 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 57-85 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to applicants' amendment dated September 11, 2003.

The previous rejection of claims 57-80 in the Paper dated June 12, 2002 is repeated.

The pending claims of record are claims 57-85.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 61-68 and 73-85 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 61, 62, 73 and 74 (and their dependent claims 63-68 and 75-85, respectively, lack support from the originally filed specification and claims for the newly added limitation "substrate comprises a cable", (claims 61, 63, 65-68 and claims 73, 75 and 77-85) and for the newly added limitation "substrate comprises a wire" (claims 62 and 64-68 and claims 74 and 76-85).

Applicant has made arguments on record that pages 6-9 provide for lubricants, that page 12 provides for lubricant on cables and page 6 provides for lubricants on wires of the instant specification.

Applicant has added arguments that page 20 of the written description makes clear that the invention inter alia comprises the application of a "coating" of the

disclosed superabsorbent polymer-lubricant composition to a substrate as well as the article of manufacture obtained. Page 20 also describes applicant's use of related art lubricants specified at pages 6-19 in the superabsorbent polymer-lubricant composition.

A carefully study and review of the instant specification indicate that the particularly selected description at pages 6-9 and 12, respectively is admitted prior art under the section of the background of the specification as to what is well-known and conventionally used in the lubricant art.

Applicant has presented arguments on record in Paper No. 12 dated August 23 2002 wherein pages 17, 8, 12 and 16 of the instant application supports the basis for the cable and wire of claims 61-68 and 73-80. The following portions of the instant specification that applicant has relied on for support of the newly added limitations are reproduced as follows:

Page 12, line 1-5: **Dispersing the inorganic compounds in various liquids such as lower molecular weight alcohols, glycols, petroleum oils, synthetic oils and water, provides compositions used in airframes lubrication, fasteners, such as nuts and bolts or screws, gears wire drawings, and lubricating fittings.**

Page 12, lines 17-24: **Polyisobutylenes find application in high temperature apparatus such as conveyors, ovens, dryers, and furnaces since they decomposes and oxidize substantially to entirely volatile by-products leaving no carbon residue contrary to petroleum based lubricants. They find use in electrical transformers, cables, and refrigerator compressors with the higher viscosity grades employed as viscosity-index additives in petroleum lubricants.**

Page 16, lines 15-20: **The emulsions, as that term is used herein, are either water in oil or oil in water emulsions, or oil in oil emulsions where the solution is either the continuous or discontinuous phase. Water dispersions are used for lubricating dies, tools, metalworking molds, and oxygen equipment and in wire drawing.**

The three above passages use the followings "used in", "find application in", "find use in" and "are used for". The examiner maintains the position of record that the said three passages do not provide support for the wire and cable of instant claims 61-68 and 73-80 and therefore the newly added limitation is considered as new matter.

Page 47, lines 7-11: **A formulation of 25 g (25% w/w) of MARVEL Mystery Oil or ROCYCO 481 Oil is added to 100 g of acetone in a stainless steel bowl and blended with a KITCHENAID KSM 90 mixer (wire whip attachment; #2 speed) for ca. minutes in a room maintained at ca 83% RH and 25 degree Centigrade. The wire mentioned in this paragraph only related to the mixer attachment that is used to blend the composition in the said formulation.**

This paragraph does not provide support for the newly added limitations. Therefore the examiner maintains the position stated of record that the newly added limitations are considered as new matter.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 58, 60, 65-66, 67-68, 70, 72, 79-80 and 84-85 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The subject matter of claim 58 (and its dependent claims) and claim 70 (and its dependent claim) that the super absorbent polymer...desorbs water the coating is dried, is not properly described in the application as filed, and consequently raised doubt as to possession of the claimed invention at the time of filing.

After a careful review and study of pages 31 and 32 of the instant application it is the examiner's position that "the lubricant composition is dried to remove water, substantially all of the water introduced in the first part of the process. This step for drying the lubricant composition appears to be different than the step "for desorbing water when the coating is dried" of instant claims 58 and 70.

The subject matter of claims 67 and 68 and claims 79-80, that the "coating comprises further a binder" is not properly described in the application as filed, and consequently raise doubt as to possession of the claimed invention at the time of filing.

After a careful review and study of pages 17-18 of the instant specification the examiner takes the position that section is directed to "binder systems". This said section is part of the background of the instant specification and is Admitted Prior Art. The Prior Art provides teachings to what is well known and conventionally used in the

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lubricant art. The examiner did not find **any explicit disclosure to any binders at pages 19, 20, and 21** and applicants did not particularly set forth or point out any such paragraph as to the location of said binders.

Applicant refers the examiner's attention to the first sentence on page 32 as well as the paragraph bridging pages 31 and 32 of the instant specification for support for the "substantially anhydrous coating" for claims 69-80.

The examiner takes the position on record that the said paragraph or sections referred to by applicants not only support the "substantially anhydrous coating" of newly added claims 69-80 but also support the "substantially anhydrous coating" of the previously pending claims 57-68. To support the examiner's position pages 31 and 32 of the instant specification is reproduced below that clearly indicate that the said passages refer to the coating of claims 57-68, as well as, claims 69-80. The said section of the instant specification is reproduced below as follow:

The lubricant and additives, when employed, are combined with the superabsorbent polymer (SAP) by swelling the polymer either by itself or dispersed with the lubricant (and additives when employed, either in water or in a high humidity environment, e.g. 80% R.H.

Prior to, or after exposing the (AP) to water or humidity, the polymer, in the form of a powder, flakes or granules is mixed with the lubricant in a conventional mixer, such as a HOBART™ mixer until a uniform dispersion is obtained. This process may be facilitated by employing a solvent or dispersant for the lubricant, preferably in some instances, one that will be easily driven off from the lubricant

composition of the invention, such as a ketone, especially the lower alkyl ketones e.g. acetone MEK, MIBK, DIBK, and the like.

The lubricant then combines with, is entrapped by or is taken up by the (SAP) that has been swollen with water or in high humidity. The lubricant composition is then dried to remove the water, for example by placing it in a 27-38% RH environment, or under vacuum or at elevated temperatures. This removes substantially all of the water introduced in the first part of the process.

The lubricant composition, prior to removal of water as described herein, or after removal of water is shaped by molding or extruding, and in the case of forming powdered or granular lubricants, is ground to mesh in a conventional grinding mill after the water has been removed.

Another outstanding feature of the lubricant compositions is their ability, under pressure to release the lubricant as a film or drop, or droplets, such as micro-droplets and to recapture the released lubricant after pressure is released or ceases. The (SAP) of the lubricant compositions in this regard were discovered to have sponge like properties, even though no sponge like characteristics, such as porosity is visible to the naked or unaided eye, when examining the lubricant compositions. However, other matrix compositions can be formulated to have porous characteristics that are plainly visible.

A lubricant composition is made in the foregoing manner employing graphite, as noted above, or a 2-mol ethoxylate of isostearyl alcohol (AROSURF® 66 E2). Although the latter is used as a surfactant, it also has some lubricant

characteristics and is to be considered as a lubricant as well as for the purpose of the present invention.

In reviewing and studying the above sections of the specification it is clear that the previous pending claims 57-68 forms a "substantially anhydrous coating" in the same manner as newly added claims 69-85.

The examiner maintains the position as stated above that contrary to applicant's allegation that page 17-21 of the instant application is a written description for support of the binders as claimed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 57-58, 61-62, 65, 69-70, 73-74, 77 and 81-82 are rejected under 35 U.S.C. 102(b) as being anticipated by Geursen et al (Geursen) WO 93/8233.

Geursen teaches a coated substrate that is coated with a composition comprising a superabsorbent polymer (SAP) in an oil-in-water emulsion, where the liquid constituents of the emulsion are wholly or partially removed from the substrate, note the abstract. Thus the teaching clearly teaches that the coated substrate of Geursen inherently is a "substantially anhydrous coating". Patentee composition comprises a lubricant and additive of the sort contemplated by applicants in claims 57-58, 61-62, 65, 69-70, 73-74, 77 and 81-82, note page 7-8. The substrate of Geursen can be a wire or cables as set forth in instant claims 61-62 and 73-74, see page 14 and the bridging

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paragraph of pages 10 to 11. With respect to claims 58, 65, 70, 72 and 81-82 and the requirement that the SAP absorbs greater than 100 times its weight in water, Geursen teaches the same type of SAP contemplated by applicants that inherently has the same property, note page 6. Patentee also teaches that copolymers of acrylic acid salt, acrylic acid, and acrylonitrile are SAP known in the art that are capable of absorbing 10 to 100 times its own weight in water, note page 3. This water property is inherent in the SAP of Geursen and anticipates the instant claims of record.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 57-58, 61-62, 65, 69-70, 73-74, 77 and 81-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geursen et al (Geursen) WO 93/18233 (that has matured into its US counterpart 5,534,304) combined with the Admitted Prior Art in view of Hopkins, Jr. et al (Hopkins) 5,362,766.

Geursen teaches and discloses a method for coating a substrate e.g. fiber or a fibrous product, page 5, lines 19-29, which includes substrates to be treated selected from the group of polyester, aliphatic polyamide, cellulose, polyolefin, polyacrylonitrile, carbon, glass and metal, claim 6, with a layer of a water-in-oil emulsion which contains a superabsorbent material (SAP) in its aqueous phase, page 5, lines 21-24. Patentees further teaches that the (SAP) includes water-soluble material having hydrophilic properties which is capable of absorbing and holding a comparatively large quantity of

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water, optionally under pressure page 6, lines 5-32. Geursen incorporates the teachings of Arroyo et al (Arroyo) EP 0.351,100 that the SAP includes the ADRIDALL polymers that are known to absorb greater than 100 times its weight in water.

Applicants makes admission on record at the paragraph bridging page 21 to 22 and pages 22-23 of the instant specification that conventional known SAP are know to have the capabilities to absorbs greater than 100 times its weight in water. The Admitted Prior Art (SAP) is the same SAP used in the instant application. Applicant further makes admission on record at line 17 of page 24 of the instant application that the ARIDALL (SAP) of the Admitted Prior Art of Arroyo is the same (SAP) used in the instant claims.

The examiner takes the position on record that the lubricant additives of the instant claims are optional component and therefore are not required.

Geursen further teaches that commercially available water-in oil emulsions that contain a (SAP) maybe employed in a combination with additives such as lubricants, stabilizers, emulsifiers and/or diluents, page 8, lines 5-10. Geursen teaches ethoxylated oleyl alcohol and ethoxylated oleic acid having use as emulsifiers and as lubricants, page 8, lines 12-14, and that the diluents, include non-aromatic naphthenic and (iso) paraffinic hydrocarbons, page 8, lines 15-18. The stabilizers incorporated into the emulsions of Geursen include sorbitan trioleate, mixtures of sorbitan trioleate and ethoxylated sorbitan trioleates, sorbitan mono(iso) stearate, and sorbitan mon-oleate, page 8, lines 27-29.

Geursen further teaches at page 9, lines 6-8 that if so desired, the water-in-oil emulsions may contain the conventional additives such as bactericides and antioxidants. Also Geursen teaches that the water-in-oil emulsion maybe applied using such methods as known in the art, page 9, lines 11-13, leaving a homogenous layer of (SAP) on the substrate, page 9, lines 23-26 and Example 1, pages 15-18. It is the examiner's position that the instant claims are directed to a coating that has been applied to a substrate by coating a substrate. It is known in the lubricant art that the lubrication composition has to be applied as a coating or to be in contact with a surface in order to exhibit its lubricating properties. The teachings of Geursen provide a coated substrate having lubricating property rendering the instant claims obvious.

Applicant further claims specific lubricants in independent claims 57 and 69 wherein Geursen is silent to teachings to said specific lubricants.

Applicant makes admission on record at page 19, lines 1-4 that "For the purpose of the present invention, all of the foregoing lubricant compounds or compositions will be referred to as materials for decreasing friction between moving surfaces or lubricants". The foregoing lubricant compounds or compositions are admitted by applicant at pages 6-19 as conventionally used as lubricant compositions to reduce frictions and are well-known lubricants that includes all of the lubricants and additives of instant claim 57 (and all of its dependent claims). It is the examiner's position that the lubricants are functional equivalents for the intended purposes of lubricating. The picking and choosing of a particular lubricant would be obvious. By applicant own

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admission any lubricant for lubricating purpose will work and are functional equivalent for the intended purpose of lubricating.

Hopkins teaches a process for preparing a composition comprising a matrix of cellulose acetate, glycerin and a superabsorbent polymer, (SAP), e.g. SANWET that is a starched grafted polyacrylate sodium salt that has the capacity to absorb as much as 800 times its own weight in liquid, note Example 1, claims 1-3, abstract, and column 1, line 29 to column 2, lines 1-33.

It would be obvious to the artisan in the art to select the lubricants and additives and (SAP) of the Admitted Prior Art and the secondary reference as the lubricants and additives and (SAP) of the primary references because the Admitted Prior Art clearly teaches that the instant claimed lubricants and additives are functional equivalents for the intended purpose to form a coating on a substrate for lubricating purpose to reduce friction between surfaces. It further would be obvious to the artisan in the art to substitute the (SAP) of the secondary references for the primary references (SAP) because the primary references and the secondary references (SAP) all inherently have the capabilities of absorbing greater than 100 times its weight in water. Thus the instant claims are rendered prima facie obvious.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 57-85 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 29-43 and 45-54 of copending Application No. 09/357, 957. Although the conflicting claims are not identical, they are not patentably distinct from each other because the coating compositions comprising a SAP, a lubricant and further including a viscosity additive or binder are not patentably distinct from the lubricant composition comprising a SAP lubricant and other lubricant of the related application. The open-ended language "comprising" in the instant application and the co-pending application would not exclude the components of the other composition or coating from each other. Thus the instant claims render the claims of the related application obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 57-85 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 57-72 of copending Application No. 09/359,809. Although the conflicting claims are not identical, they are not patentably distinct from each other because the coating compositions comprising a SAP, a lubricant and further including a viscosity additive or binder are not patentably distinct from the related application product by process lubricant composition comprising SAP, lubricant and other lubricant additives because the claims contain the

open-ended language "comprising" would not exclude the components of the other composition or coating from each other. Thus the instant claims render the claims of the related application obvious.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 57-85 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 57-61, 63-71 and 73-77 of copending Application No. 09/799, 559. Although the conflicting claims are not identical, they are not patentably distinct from each other because the coated substrate having a coating composition a lubricant, a SAP and further including a viscosity additive or binder renders obvious the coated substrate having a coating comprising a lubricant, a SAP, and optional additives.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

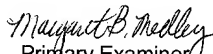
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record on September 11, 2003 has been reviewed and made of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is (703) 308-2518. The examiner can normally be reached on Monday--Friday from 7:30 a.m. to 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Primary Examiner
Margaret B. Medley
Art Unit 1714

M.B. Medley
December 15, 2003